



Attorney Docket No. IMMR-070/01US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

re application of Louis B. ROSENBERG et al.

Serial No.: 09/678,110

Examiner: Alecia Diane Nelson

Filed: October 2, 2000

Art Unit: 2675

Confirmation No.: 4151

For: **ROTARY FORCE FEEDBACK WHEELS FOR REMOTE CONTROL DEVICES**

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INFORMATION DISCLOSURE STATEMENT TRANSMITTAL

Enclosed is an Information Disclosure Statement and accompanying Form PTO/SB/08A for the above-identified patent application.

- ☒ In accordance with 37 C.F.R. §1.97(b), no additional fee for submission of the IDS is required.
- ☐ In accordance with 37 C.F.R. §1.97(c), also enclosed is:
 - ☐ the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p); or
 - ☐ a statement as specified in 37 C.F.R. §1.97(e).
- ☐ In accordance with 37 C.F.R. §1.97(d), a statement as specified in 37 C.F.R. §1.97(e) and the fee of \$180.00 as set forth in 37 C.F.R. §1.17(p) are also enclosed.
- ☐ Check No. ___ in the amount of \$___ for the total fee is attached.
- ☐ A return receipt postcard is also enclosed.
- ☐ Please charge \$___ to Deposit Account No. 50-1283 for the total fee. This paper is being submitted in duplicate.

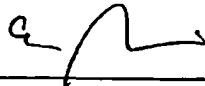
The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R.
§§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to
Deposit Account No. 50-1283.

Dated: May 28, 2004

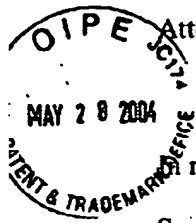
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Respectfully submitted,
COOLEY GODWARD LLP

By:



Erik B. Milch
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Attorney Docket No. IMMR-070/01US

PATENT

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re application of Louis B. ROSENBERG et al.

Serial No.: 09/678,110

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**INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §1.97(b)**

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56, Applicant(s) hereby submits the following information in conformance with 37 C.F.R. §§1.97 and 1.98.

- ☒ Pursuant to 37 C.F.R. §1.98, a copy of each document cited in the attached Form PTO/SB/08 (1 of 2) is provided on the enclosed CD.
- ☒ No copies of the publications listed on the attached Form PTO/SB/08A (2 of 2) are being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial No. 09/049,155 (now U.S. Patent No. 6,128,006) to which the above-identified application claims priority under 35 U.S.C. §120.
- ☒ No copies of the publications listed on attached Form 1449 are being provided because the references were listed in an Information Disclosure Statement filed December 10, 2001, for which the Applicants did not receive written confirmation of the references being considered by the Examiner. The references listed on the Form 1449 that are identified by the asterisk (*) were previously cited by or submitted to the Office in prior Application Serial No. 09/049,155 (now U.S. Patent No. 6,128,006) to which the above-identified application claims priority under 35 U.S.C. §120.
- ☐ No copies of any U.S. patents or U.S. patent application publications listed on the attached Form PTO/SB/08A are being provided pursuant to 37 C.F.R. §1.98 because this application was filed after June 30, 2003.

Match and Return

- ☐ Publication(s) ___ listed on the attached Form PTO/SB/08A were cited in a foreign search or examination report corresponding to ___ application serial no. and mailed on ___.
- ☐ Enclosed is a copy of a non-English publication(s) ___. Pursuant to §609 of the M.P.E.P., Applicant submits the attached foreign search or examination report, which cites such non-English language publication(s).
- ☐ Enclosed is a copy of a non-English publication(s) ___. English language publication ___ (copy enclosed) claims priority from this non-English publication.
- ☐ Enclosed is an explanation of non-English publication(s) ___ for which an English translation is not available.
- ☐ Enclosed is an English translation of non-English publication(s) ___ cited in the attached Form PTO/SB/08A.
- ☐ Enclosed is a copy of pending U.S. Patent Application Serial No. _____.

This Information Disclosure Statement is filed within any one of the following time periods:

- ☐ within three months from the filing date of this national application other than a CPA under 37 C.F.R. § 1.53(d);
- ☐ within three months from the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in this international application;
- ☐ before the mailing date of a first office action on the merits; or
- ☒ before the mailing of a first office action after the filing of a request for continued examination under 37 C.F.R. § 1.114.


It is respectfully requested that the Examiner consider the above-noted information and return an initialed copy of the attached Form PTO/SB/08A to the undersigned.

Dated: May 28, 2004

Cooley Godward LLP
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Respectfully submitted,
COOLEY GODWARD LLP

By:



Erik B. Milch
Reg. No. 42,887



(1 of 2)

PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 1

of

3

Complete if Known

| | |
|------------------------|---------------------|
| Application Number | 09/678,110 |
| Filing Date | October 2, 2000 |
| First Named Inventor | Louis B. Rosenberg |
| Art Unit | 2675 |
| Examiner Name | Alecia Diane Nelson |
| Attorney Docket Number | IMMR070/01US |

U.S. PATENT DOCUMENTS

| Examiner | Cite No. ¹ | Document Number | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|----------|-----------------------|-----------------|-----------------------------------|--------------------------------|--|---|
| | | Number | Kind Code ² (if known) | | | |
| | A1 | 6,422,941 | | 7/23/2002 | Thomer et al. | |
| | A2 | 6,160,489 | | 12/12/2000 | Perry et al. | |
| | A3 | 6,111,577 | | 8/29/2000 | Zilles et al. | |
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| | A19 | 2,972,140 | | 2/14/1961 | Hirsch | |

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| Examiner Initials* | Cite No. ¹ | Foreign Patent Document | | | Publication Date MM-DD-YYYY | Name of Patentee or Applicant of Cited Document | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|-----------------------|--------------------------|---------------------------|---------------------|-----------------------------------|--------------------------------|---|--|
| | | Country Code ³ | Number ⁴ | Kind Code ⁵ (if known) | | | |
| | B1 | JP | H2-185278 | | 7/19/1990 | Taito Corporation | |
| | B2 | JP | H4-8381 | | 1/13/1992 | Epoch Co. and Key- Planning Co. | |
| | B3 | JP | H7-24147 | | 1/27/1995 | Sega Corporation | |
| | B4 | JP | H5-192449 | | 8/3/1993 | Taito Corporation | |

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SignatureDate
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Kind Codes of U.S. Patent Documents at www.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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PTO/SB/08A (10-01)

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet **2** of **3**

Complete if Known

| | |
|------------------------|---------------------|
| Application Number | 09/678,110 |
| Filing Date | October 2, 2000 |
| First Named Inventor | Louis B. Rosenberg |
| Art Unit | 2675 |
| Examiner Name | Alecia Diane Nelson |
| Attorney Docket Number | IMMR070/01US |

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OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

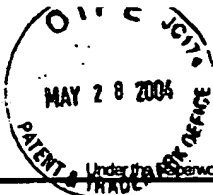
| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |
|---------------------|-----------------------|--|
| | C1 | PATRICK, "Design, Construction, and Testing of a Fingertip Tactile Display for Interaction with Virtual and Remote Environments," <i>Master of Science Thesis</i> , MIT, Aug. 1990, archived Nov. 8, 1990. |
| | C2 | CALDER, "Design of A Force-Feedback Touch-Introducing Actuator For Teleoperator Robot Control," <i>Bachelor of Science Thesis</i> , MIT, May 1983, archived June 23, 1983. |
| | C3 | WIKER, "Teletouch Display Development: Phase 1 Report," <i>Technical Report 1230</i> , Naval Ocean Systems Center, San Diego, July 1988. |
| | C4 | BLISS, "Optical-to-Tactile Image Conversion for the Blind," <i>IEEE Transactions on Man-Machine Systems</i> , Vol. MMS-11, No. 1, March 1970. |
| | C5 | JOHNSON, "Shape-Memory Alloy Tactile Feedback Actuator," <i>Armstrong Aerospace Medical Research Laboratory</i> , AAMRL-TR-90-039, August, 1990. |
| | C6 | KONTARINIS et al., "Tactile Display of Vibratory Information in Teleoperation and Virtual Environments," <i>PRESENCE</i> , 4(4):387-402, Harvard Univ., 1995. |
| | C7 | AUKSTAKALNIS et al., "Silicon Mirage: The Art and Science of Virtual Reality," ISBN 0-938151-82-7, pp. 129-180, 1992. |
| | C8 | EBERHARDT et al., "Inducing Dynamic Haptic Perception by The Hand: System Description and Some Results," <i>DSC-Vol. 55-1, Dynamic Systems and Control: Volume 1</i> , ASME 1994. |
| | C9 | GOBEL et al., "Tactile Feedback Applied to Computer Mice," <i>International Journal of Human-Computer Interaction</i> , Vol. 7, No. 1, pp. 1-24, 1995. |
| | C10 | PIMENTEL et al., "Virtual Reality: through the new looking glass," 2 nd Edition; McGraw-Hill, ISBN 0-07-050187-X, pp. 41-202, 1994. |
| | C11 | "Cyberman Technical Specification," <i>Logitech Cyberman SWIFT Supplement to Logitech Mouse Technical Reference and Programming Guide</i> , 4/5/1994. |
| | C12 | OUHYOUNG et al., "The Development of A Low-Cost Force Feedback Joystick and Its Use in the Virtual Reality Environment," <i>Proceedings of the Third Pacific Conference on Computer Graphics and Applications, Pacific Graphics '95</i> , Seoul, Korea, 21-24 August 1995. |
| | C13 | KACZMAREK et al., "Tactile Displays," <i>Virtual Environment Technologies</i> , Chap. 9, pp. 349-414. |
| | C14 | LAKE, "Cyberman from Logitech," at http://www.ibiblio.org/GameBytes/issue21/greviews/cyberman.html , 1994. |
| | C15 | "Component Maintenance Manual With Illustrated Parts List, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 28 January 2002 (3 pages). |

Examiner
SignatureDate
Considered

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

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Sheet **3** of **3**

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| | |
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| Application Number | 09/878,110 |
| Filing Date | October 2, 2000 |
| First Named Inventor | Louis B. Rosenberg |
| Art Unit | 2675 |
| Examiner Name | Alecia Diane Nelson |
| Attorney Docket Number | IMMR070/01US |

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

| Examiner Initials * | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |
|------------------------|--------------------------|---|
| | C16 | "Technical Manual Overhaul Instructions With Parts Breakdown, Coaxial Control Shaker Part No. C-25502," Safe Flight Instrument Corporation, Revised 15 July 1980 (23 pages). |
| | C17 | SCANNELL, "Taking a Joystick Ride," <i>Computer Currents</i> , Boston Edition, Vol. 9, No. 11, November 1994 |
| | C18 | YAMAKITA et al., "Tele-Virtual Reality of Dynamic Mechanical Model," <i>Proceedings of the 1992 IEEE/RSJ International Conference on Intelligent Robots and Systems</i> , Raleigh, NC, July 7-10, 1992 |
| | C19 | NOLL, "Man-Machine Tactile," <i>SID Journal</i> , July/August 1972 Issue. |
| | C20 | ROSENBERG, "Virtual Fixtures: Perceptual Overlays Enhance Operator Performance In Telepresence Tasks," <i>Ph.D. Dissertation</i> , Stanford University, June 1994. |

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|-----------------------|--|--------------------|--|
| Examiner Signature | | Date Considered | |
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| | | |
|---|---------------------------------------|---------------------------------------|
| Form 1449 (Modified) Information Disclosure Statement By Applicant <i>(Use Several Sheets if Necessary)</i> | Atty Docket No.: IMM1P044A | Application No.: 09/678,110 |
| | Applicant: Rosenberg et al. | |
| | Filing Date: 10/2/01 | Group: 2675 |

U.S. Patent Documents

| Examiner Initial | Patent No. | Date | Patentee | Class | Sub- Class | Filing Date |
|---------------------|-------------|----------|--------------------|-------|---------------|----------------|
| | * 3,919,691 | 11/11/75 | Noll | 340 | 172.5 | 5/26/71 |
| | * 4,050,265 | 9/27/77 | Drennen et al. | 64 | 11 | 8/3/76 |
| | * 4,131,033 | 12/26/78 | Wright et al. | 74 | 553 | 2/18/77 |
| | * 4,477,043 | 10/16/84 | Repperger | 244 | 223 | 12/15/82 |
| | * 4,560,983 | 12/24/85 | Williams | 340 | 825 | 9/17/82 |
| | 4,692,756 | 9/8/87 | Clark | 340 | 709 | 7/5/84 |
| | * 4,706,294 | 11/10/87 | Ouchida | 381 | 109 | 6/10/86 |
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| | * 4,782,327 | 11/1/88 | Kley et al. | 340 | 365 | 1/2/85 |
| | * 4,795,296 | 1/3/89 | Jau | 414 | 5 | 11/17/86 |
| | * 4,800,721 | 1/31/89 | Cemenska et al. | 60 | 393 | 2/13/87 |
| | * 4,823,634 | 4/25/89 | Culver | 74 | 471 | 11/3/87 |
| | * 4,868,549 | 9/19/89 | Affinito et al. | 340 | 710 | 5/18/87 |
| | * 4,935,728 | 6/19/90 | Kley | 340 | 709 | 11/20/87 |
| | * 4,943,866 | 7/24/90 | Barker et al. | 358 | 335 | 6/16/89 |
| | * 4,964,004 | 10/16/90 | Barker | 360 | 14.1 | 6/16/89 |
| | * 4,979,050 | 12/18/90 | Westland et al. | 360 | 14.1 | 12/2/83 |
| | * 4,983,901 | 1/8/91 | Lehmer | 318 | 685 | 4/21/89 |
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| Examiner: | Date Considered: |
|------------------|-------------------------|

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

| | | |
|---|---------------------------------------|---------------------------------------|
| Form 1449 (Modified) Information Disclosure Statement By Applicant <i>(Use Several Sheets if Necessary)</i> | Atty Docket No.: IMM1P044A | Application No.: 09/678,110 |
| | Applicant: Rosenberg et al. | |
| | Filing Date: 10/2/01 | Group: 2675 |

U.S. Patent Documents

| Examiner Initial | Patent No. | Date | Patentee | Class | Sub- Class | Filing Date |
|---------------------|------------|----------|------------------|-------|---------------|----------------|
| * | 5,220,260 | 6/15/93 | Schuler | 318 | 561 | 10/24/91 |
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| * | 5,235,868 | 8/17/93 | Culver | 74 | 471 | 10/2/91 |
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| * | 5,355,148 | 10/11/94 | Anderson | 345 | 166 | 1/14/93 |
| * | 5,374,942 | 12/20/94 | Gilligan et al. | 345 | 157 | 8/12/93 |
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| * | 5,473,344 | 12/5/95 | Bacon et al. | 345 | 163 | |
| * | 5,477,237 | 12/19/95 | Parks | 345 | 156 | 7/14/94 |
| * | 5,491,477 | 2/13/96 | Clark et al. | 341 | 20 | 9/13/93 |
| * | 5,513,100 | 4/30/96 | Parker et al. | 364 | 167.01 | 6/10/93 |
| * | 5,530,455 | 6/25/96 | Gillick et al. | 345 | 163 | 8/10/94 |
| * | 5,541,379 | 7/30/96 | Kim | 200 | 566 | 1/18/95 |
| * | 5,542,672 | 8/6/96 | Meredith | 463 | 37 | 3/17/95 |
| * | 5,543,821 | 8/6/96 | Marchis et al. | 345 | 167 | 7/20/94 |
| * | 5,576,727 | 11/19/96 | Rosenberg et al. | 345 | 179 | 6/5/95 |
| * | 5,589,828 | 12/31/96 | Armstrong | 341 | 20 | 3/5/92 |
| * | 5,589,854 | 12/31/96 | Tsai | 345 | 161 | 6/22/95 |

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| Examiner: | Date Considered: |
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Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form 1449 (Modified)

Information Disclosure
Statement By Applicant

(Use Several Sheets if Necessary)

Atty Docket No.:

IMM1P044A

Application No.:

09/678,110

Applicant:

Rosenberg et al.

Filing Date:

10/2/01

Group:

2675

U.S. Patent Documents

| Examiner Initial | Patent No. | Date | Patentee | Class | Sub- Class | Filing Date |
|---------------------|-------------|----------|--------------------|-------|---------------|----------------|
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| Form 1449 (Modified) Information Disclosure Statement By Applicant <i>(Use Several Sheets if Necessary)</i> | Atty Docket No.: IMM1P044A | Application No.: 09/678,110 |
| | Applicant: Rosenberg et al. | |
| | Filing Date: 10/2/01 | Group: 2675 |

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| | Applicant: Rosenberg et al. | |
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